

REMARKS

It is noted that, notwithstanding any claim amendments made herein, Applicants' intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1, 3, 4, and 7-53 are all of the claims pending in the present Application. Claims 4, 8-41, and 45 stand rejected under 35 USC §112, first paragraph, as failing the written description requirement.

Claims 1, 7, and 47 stand rejected under 35 USC §103(a) as unpatentable over US Patent 5,434,917 to Naccache et al., further in view of US Patent 5,974,150 to Kaish, and further in view of US Patent 6,543,685 to Lien et al. Claims 3, 4, 8, 19-23, 25-33, 38-40, and 43 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of US Patent 5,426,700 to Berson.

Claims 34-36 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, and further in view of Berson. Claims 44, 52, and 53 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of US Patent 6,131,090 to Basso et al. Claim 9 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, and further in view of US Patent 5,949,881 to Davis.

Claims 10 and 11 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, further in view of Davis, and further in view of US Patent 6,297,888 to Noyes et al. Claims 12 and 13 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, and further in view of US Patent 6,297,888 to Noyes et al.

Claims 14 and 37 stand rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, and further in view of US Patent 6,155,605 to Bratchley et al. Claim 41 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, and further in view of Basso.

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Claim 45 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, further in view of Berson, and further in view of US Patent 5,257,389 to Liu et al. Claim 46 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of Noyes.

Claim 48 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of US Patent 6,233,339 to Kawano et al. Claim 49 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of US Patent 6,155,605 to Bratchley et al.

Claim 51 stands rejected under 35 USC §103(a) as unpatentable over Naccache, further in view of Kaish, further in view of Lien, and further in view of US Patent 3,795,805 to Swanberg et al.

Applicants gratefully acknowledge the Examiner's indication that claims 15-18, 24, and 50 would be allowable if rewritten in independent format and, as appropriate, in a manner that overcomes the rejection under 35 USC §112, first paragraph. However, Applicants believe that all the claims are allowable.

Therefore, these rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

As described and claimed, for example by claim 39, the present invention is directed to a method of guaranteeing authenticity of an object that includes or has attached thereto at least one of a chip with a recording support and another recording support.

Attached to the object is a first sample of material obtainable by at least one of a chemical process and a physical process having a characteristic that samples generated by the process are random and non-reproducible. The first sample is associated with a first number obtained by reading the first sample using a first reader of a specific sort.

An exact value of the first number is recorded on at least one of the recording supports at said time of production in an exactly readable way, so that the first number can be checked against a later reading made with any reader of the specific sort at each time of verification of the

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object, thereby providing a first verification that verifies that a sample being read at the verification of the object is indeed the first sample.

At the time of production, at least one encrypted version of the first number is formed. At least one of the encrypted versions of the first number is also recorded in an exactly readable way on the object at the time of production. The at least one encrypted version of the first number is obtained by a method from public key cryptography. The recording of the at least one encrypted version thereby provides a second verification that verifies at the verification that the encrypted version of the first number was generated by an authorized party.

Information concerning the public key cryptography method is available so that the second verification can be made by anyone of an intended public.

The rejection currently of record attempts to use isolated bits and pieces from a large number of prior art references to reconstruct the combinations of elements defined in the claimed invention. However, Applicants submit that, not only does such evaluation approach violate the “as a whole” requirement of 35 USC §103, as discussed in MPEP §2141.02 (“*In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.*”), but that the primary reference Naccache is disqualified to serve as a primary reference by reason that it fails to satisfy the plain meaning of the language of the independent claims requiring affixation to an object, since it teaches the entirely different concept that the object itself being protected (e.g., the plastic card) is itself the random-sample object, rather than the plastic card as being affixed to the object being protected.

II. THE REJECTION BASED ON 35 USC §112, FIRST PARAGRAPH

Claims 4, 8-41, and 45 stand rejected as failing the written description requirement because the Examiner considers that the description in claims 33-36 and 39, wherein is described the recording of the unencoded version of the number in addition to the encoded version, lacks support in the specification.

In response, Applicants direct the Examiner’s attention to items 105, 107, and the description at lines 18-19 on page 17, wherein is described that, in an alternate embodiment, 107

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represents the recording of the digital representation of the original reading. This second record is in addition to the encrypted version recorded in medium 105.

Therefore, Applicants submit that the original disclosure does indeed contain the required written description of this embodiment. As Applicants have explained, the motivation for this embodiment is that of allowing the raw reading of each new scan of the sample to be cursorily checked for accuracy with the raw reading of the original scan.

Therefore, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

III. THE PRIOR ART REJECTIONS

III A. Introduction

Applicants submit that the rejection currently of record fails to meet the initial burden of a *prima facie* rejection for the various reasons, including those reasons currently of record, but including now the above-noted newly-described observation that primary reference Naccache teaches the use of a plastic card having therein-embedded random marbles. This plastic card is clearly not affixed to (or attached to) an object being protected, thereby clearly failing to satisfy the plain meaning of the language of at least independent claims 1, 39, 42, and 52.

Furthermore, relative to newly-cited secondary reference Berson, Applicants point out that, to one having ordinary skill in the art, this reference fails to provide the feature upon which the Examiner relies. That is, the Examiner introduces Berson as demonstrating the writing of an unencoded version of the sample affixed to the object, as indicated by the rejection for claims 3, 4, 8, 19-23, 25-33, 38-40, 42, and 43 contained in paragraph 5 beginning on page 5 of the Office Action. However, the "information" described at lines 23-27 of column 6 of Berson fails to satisfy the plain meaning of the claim language wherein it is required that the unencrypted information is the reading of the scanner. Berson makes no suggestion whatsoever of recording the raw data from a scanner. For this reason alone, Berson does not overcome the deficiencies conceded by the Examiner to be present for those claims for which this newly-cited secondary reference is introduced.

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III B. Applicants' Responses to the Examiner's Arguments

Before addressing the new rejections in the latest Office Action, Applicants respond to the arguments advanced by the Examiner beginning at paragraph 21 on page 23 of that Office Action.

In paragraph 22, the Examiner responds to Applicants' argument #1 that claim 1 fails to clearly define whether the number is encrypted or unencrypted.

In response, although Applicants believe that, to one having ordinary skill in the art, this claim language, by making reference to the association of a number by a reader (e.g., not an encryption device) does indeed distinguish between encrypted/unencrypted scanner results. However, in an attempt to expedite prosecution, Applicants have amended claim 1 to clearly identify that the result from the reader that is recorded is not encrypted.

In paragraph 23, the Examiner explains that, relative to the rejection for claim 8, "... the signature scheme is the claimed digital representation; it is the variance in readings [that] makes the reading of 'more information' obvious."

In response, Applicants submit that the Examiner's understanding of Naccache is incorrect, since, to one having ordinary skill in the art, if the marbles cannot be precisely read by the scanner, then this method of authentication has little value. That is, the technique in this primary reference relies upon being able to detect each marble. If some readers cannot detect some of the marbles, then this plastic card has no value in an authentication scheme.

Moreover, the development of the signature scheme described at line 67 of column 2 is an entirely different concept from that of being able to read less information from the sample.

In paragraph 24, the Examiner asserts that "... there are many types of materials other than steel balls that can be encased in plastic, including fibers."

In response, Applicants consider that the Examiner has invoked Official Notice and requests that a reasonably combinable reference be provided. There is no suggestion in either Naccache or Kaish to embed fibers in a plastic card.

In paragraph 25 (also paragraph 29), the Examiner seems to have missed the point of Applicants' argument, since Applicants were not arguing that the present invention is not directed toward copyrighted material, as the Examiner implies in his response.

Rather, Applicants' argument was that the rigid plastic card of the primary reference

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Naccache is not used in the environment of a copyrighted document such as its use in the secondary reference Kaish. That is, there is no suggestion to affix the plastic card of Naccache to a copyrighted document as is done in Kaish. Because of this disparate environment, Applicants argued that there is no reasonable motivation to modify the primary reference with Kaish, since the motivation for copyright protection would not be present for the plastic card of Naccache.

In paragraph 26, the Examiner argues that the motivation to modify Naccache by Lien is found in lines 16-18 of column 1 of Lien, which lines read: "... *but also encoding a magnetic strip on the card and adding in a program into an embedded chip for "smart card" status.*"

In response, Applicants submit that the Examiner seems to confuse the capability to modify a primary reference with the suggestion to modify the primary reference. Applicants submit that there is no need in the method described in Naccache to modify the plastic card for a second recording medium. Since there is no such need for a second medium in Naccache, the existence of the mechanism in secondary reference Lien that provides a second medium is irrelevant.

In paragraph 27, the new rejection obviates a need for Applicants to respond.

In paragraph 28 (and 31), the Examiner responds that secondary reference Kaish teaches a material that would decay over time.

In response, Applicants submit that the Examiner's response merely reinforces Applicants' position that the Examiner is attempting to take bits and pieces from disparate references in order to reconstruct the claimed invention. The burden on the Examiner is to provide a reasonable motivation to modify primary reference Naccache. In the rejection currently of record, the Examiner ignores this fundamental burden and merely replaces the steel marbles used in Naccache with the fibers used in Kaish, presumably because the Examiner considers all the methods used in the cited references as being freely interchangeable in their respective characteristics.

Applicants submit that this reasoning is a fundamental flaw in the rejection currently of record, since these cited references are patentably distinct from each other, thereby inherently using different techniques and having different characteristics. Therefore, Applicants submit that the Examiner's initial burden of providing a motivation to modify the primary reference

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Naccache is not met by merely interchanging materials or characteristics between the various references.

In paragraph 30, the Examiner asserts that each of secondary references Basso, Liu, and Noyes "... teaches a particular concept that is pertinent to Naccache and Kaish."

In response, Applicants submit that the Examiner's statement describes exactly violation of the "as a whole" requirement of 35 USC §103, as discussed in MPEP §2141.02 (*"In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious."*)

In paragraph 32, the Examiner explains that the "... Kawano invention may still have a rigid exterior. Kawano's modification constitutes a seal, since its piercing is being treated as a tamper event."

In response, Applicants submit that, notwithstanding the Examiner's analysis and comments, the principle of operation of Kawano is entirely different from that of primary reference Naccache. The Examiner seems to be attempting to substitute engineering common sense with a word game.

In paragraph 33, the Examiner replies: "... since the card may be divided into regions as per Kaish, the destruction of one region does not render the entire card inoperative."

In response, Applicants submit that there is no suggestion in Naccache to read only a section of the plastic card or to use different sections of the card to develop different codes. Nor is there any need to do so. Again, Applicants submit that the Examiner ignores the "as a whole" requirement of 35 USC §103.

In paragraph 34, the Examiner replies: "... no reason can be found that the respective references do not teach the cited limitations."

In response, Applicants submit that the Examiner's initial burden is not met by merely alleging that Applicants have provided a detailed explanation that the plain meaning of the claim language has not been even attempted in the rejection.

III C. The Revised/New Prior Art Rejections

In paragraph 4, beginning on page 3 of the Office Action, claims 1, 7, and 47 are rejected

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as being unpatentable over Naccache, as modified by Kaish and by Lien.

Applicants submit that this rejection fails to meet the initial burden of a *prima facie* rejection.

First, claim 1 requires that the sample be affixed to the object being authenticated. Primary reference Naccache addresses a standalone plastic card and there is no suggestion to affix this plastic card to an object to be authenticated. Indeed, it is the memory card itself that is being authenticated in Naccache.

Second, there is no suggestion in Naccache, Kaish, or Lien to record the number associated with the reader.

Third, there is clearly no need in the method of Naccache to modify this primary reference in accordance with either secondary reference Kaish or Lien. That is, relative to the capability of Kaish to be useful for an object having copyright registration, the plastic card of primary reference Naccache is not intended to be used in an environment that it is attached to another object, let alone an object having copyrighted material intended to be protected. Relative to Lien, there is no need to convert the plastic card of Naccache into a “smart card” status.

Moreover, Applicants submit that the evaluation in this rejection merely uses the claimed invention as a roadmap and violates the “as a whole” requirement of 35 USC §103, as discussed in MPEP §2141.02 (“*In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.*”

Hence, turning to the clear language of the claims, in Naccache there is no teaching or suggestion of: “...and affixing said sample to said object; ... recording said number as an unencrypted number read by said reader on said object on at least one of said first recording support and said second recording support”, as required by claim 1.

It is noted that the comments concerning claim 33 and 39 seem to be out of context and, therefore, not addressed at this point.

Relative to the rejection for claim 47, Applicants submit that modification of Naccache by replacing the steel marbles with fabric would change the principle of operation of the primary reference Naccache that relies upon a scanner using magnetic inductance detectors (lines 43-45 of column 1) and, therefore, would not be permitted by the holding in *In re Ratti*, 270 F.2d 810,

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123 USPQ 349 (CCPA 1959), as described in MPEP §2143.01: *"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious."*

In paragraph 5, beginning on page 5 of the Office Action, claims 3, 4, 8, 19-23, 25-33, 38-40, 42, and 43 are rejected as unpatentable over Naccache, further in view of Kaish, Lien, and Berson.

The Examiner introduces newly-cited Berson to address the feature of "... writing an unencoded version of information on a document apparatus"

Applicants submit that the description at lines 23-27 of column 6 of this secondary reference Berson relates to a "representation of the particular class Cj", which feature fails to satisfy the plain meaning of the claim language that requires that the "information" recorded be that of the reader. Moreover, Applicants submit that primary reference Naccache does not have any "particular classes Cj", thereby rendering nonsensical the motivation to modify the primary reference.

Hence, turning to the clear language of the claims, in Naccache there is no teaching or suggestion of: "... recording, on at least one of said recording supports, at said time of production, in an exactly readable way, an exact value of said first number so that said first number can be checked against a later reading made with any reader of said specific sort at each time of verification of said object, thereby providing a first verification that verifies that a sample being read at said verification of said object is indeed said first sample....", as required by independent claim 39. Independent claim 33 has a similar concept.

Relative to the rejection for claim 42, Applicants submit that the rejection currently of record fails to address the final claim limitation and that primary reference Naccache does not have a reasonable indication of statistical variations in the readings.

Relative to the rejection for claim 8, Applicants submit that the Examiner's description of primary reference Naccache is incorrect. If the reader cannot reliably detect the marbles, the method cannot be used for authentication. Moreover, the rejection of record fails to address the final claim limitation describing that the full information of the initial reading is recorded.

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Relative to the rejection for claims 26-29, it is pointed out that these four claims are not addressing the same subject matter and that the rejection currently of record fails to meet the initial burden of a proper rejection. Relative to the motivation to modify Naccache with Kaish for these claims, Applicants submit that primary reference Naccache addresses a plastic card, not a device to be affixed to an object for authentication. Therefore, there is no reason to modify Naccache in accordance with Kaish because such modification would: "... compel expedited examination of suspect goods", as alleged by the Examiner.

Relative to the rejection for claim 19, in contrast to secondary reference Kaish, primary reference Naccache is not intended to be affixed to paper. Naccache clearly addresses the entirely different purpose of memory cards.

Relative to the rejection for claims 20, 21, and 30, the Examiner is requested to point to specific lines that demonstrate a dynamic recalculating feature of the prior art, including recalculation for new data.

Relative to the rejection for claim 32, Applicants request that the Examiner point to specific lines in Naccache related to a plurality of coded versions or to the need for such plurality of coded words.

Relative to the rejection for claim 37, primary reference Naccache is directed to a memory card, not an object of manufacture. Therefore, there is no need to modify Naccache for a date of manufacture.

Relative to the rejection for claim 38, primary reference Naccache is directed to a memory card and is not intended to be affixed to an object. Therefore, there is "object" in Naccache for which to identify a functionality.

In paragraph 6, beginning on page 9 of the Office Action, claims 34-36 are rejected as being unpatentable over Naccache, as modified by Kaish and Berson. Applicants make no additional comments on the appropriateness of modifying primary reference Naccache by these two references from the comments made prior in this paper.

In paragraph 7, beginning on page 13 of the Office Action, claims 44, 52, and 53 are rejected as being unpatentable over Naccache, as modified by Kaish, Lien, and Basso.

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Applicants make no additional comments on the appropriateness of modifying primary reference Naccache by these two references from the comments made prior in this paper.

In paragraph 8, beginning on page 14 of the Office Action, claim 9 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, Berson, and newly-cited Davis. Applicants submit that newly-cited Davis is non-analogous art, since it relates to the authentication of a computer, not a smart card such as addressed in primary reference Naccache, and, therefore, not properly combinable.

In paragraph 9, beginning on page 15 of the Office Action, claims 10 and 11 are rejected as unpatentable over Naccache, as modified by Kaish, Lien, Berson, Davis, and Noyes. Applicants are not sure what exactly the Examiner's train of reasoning is, however, Applicants submit that, to one having ordinary skill in the art, using an averaging technique in the technique of primary reference Naccache would defeat its purpose of being dependent upon being able to detect each marble. As mentioned previously, if the magnetic detectors of Naccache are unable to detect the marbles, then this method is useless for authentication.

In paragraph 10, beginning on page 16 of the Office Action, claims 12 and 13 are rejected as unpatentable over Naccache, as modified by Kaish, Lien, Berson, and Noyes. Applicants submit that this rejection makes no reasonable evaluation based on modifying the primary reference Naccache. Naccache requires a precise detection of each marble. The rejection seems to substitute Kaish as the primary reference.

In paragraph 11, beginning on page 16 of the Office Action, claims 14 and 37 are rejected as unpatentable over Naccache, as modified by Kaish, Lien, Berson, and Bratchley. Applicants repeat that the marbles embedded in the plastic card of primary reference Naccache are not subject to degeneration over time. Secondary reference Bratchley uses an entirely different principle of operation and is, therefore, non-analogous. Moreover, relative to claim 37, primary reference Naccache is not intended to be affixed to an object, thereby rendering nonsensical a modification to include a date of issue of the object.

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In paragraph 12, beginning on page 17 of the Office Action, claim 41 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, Berson, and Basso. Applicants submit that Basso relates to access of medical records, an entirely different problem from either Naccache or the present invention and is, therefore, non-analogous art and not properly combinable.

In paragraph 13, beginning on page 18 of the Office Action, claim 45 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, Berson, and Liu. Applicants submit that secondary reference Liu is not related to the problem being addressed by primary reference Naccache and is, therefore, non-analogous art and not properly combinable.

In paragraph 14, on page 19 of the Office Action, claim 46 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, and Noyes. Applicants again submit that primary reference Naccache is not based upon a principle of operation wherein some of the marbles can be ignored.

In paragraph 15, on page 20 of the Office Action, claim 48 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, and Kawano. Applicants again submit that the plastic card described in primary reference Naccache is not intended to be affixed to an object, let alone an object pressurized object having pressure detectors for detecting changes in pressure. Kawano is clearly non-analogous to Naccache and, therefore, not properly combinable, and clearly operates on a different principle of operation.

In paragraph 16, beginning on page 20 of the Office Action, claim 49 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, and Bratchley. As previously discussed, secondary reference Bratchley clearly has a different principle of operation from primary reference Naccache and, therefore, not properly combinable.

In paragraph 17, beginning on page 21 of the Office Action, claim 51 is rejected as being unpatentable over Naccache, as modified by Kaish, Lien, and Swanberg. Applicants submit that

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secondary reference Swanberg is based on an entirely different principle of operation from primary reference Naccache and, therefore, not properly combinable.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 3, 4, and 7-53, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

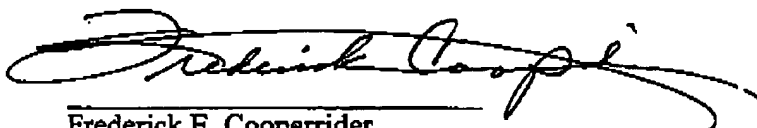
Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 09-0441.

Respectfully Submitted,

Date:

4/13/06



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CERTIFICATION OF TRANSMISSION

I certify that I transmitted via facsimile to (571) 273-8300/-3834 this Amendment under 37 CFR §1.111 to Examiner M. Heneghan on April 13, 2006.



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